

# Dermatology: A to Z

Len Sperling, M.D.

COL, MC,USA

Dept. of Dermatology, USU

A is for:

- Acanthosis nigricans

# Acanthosis nigricans (AN)

- Velvety thickening and darkening (hyperpigmentation) of the skin, especially on the nape of the neck, axillae and other body folds

# Acanthosis nigricans



# Acanthosis nigricans (AN)

- underlying causes may be hereditary or acquired, and include:
  - **endocrine disorders**, especially **diabetes**, also hyperandrogenic states, Cushing's disease
  - **Obesity**, especially in dark-skinned individuals
  - **drugs**, especially nicotinic acid
  - **“malignant”** acanthosis nigricans, associated with GI and GU tumors, others
  - **hereditary, benign** AN: no definable underlying problem

# Acanthosis nigricans (AN)

- Hyperinsulinemia seems to be a common denominator in many forms of AN

# “Malignant” AN





# B is for:

- Bowen's disease





# Bowen's disease

- An intraepidermal (in situ) primary malignancy of keratinocytes—a squamous cell carcinoma *in situ*
- May arise in sun-exposed or sun protected areas
- Multiple etiologies: UV light, x-irradiation, chemicals, human papillomavirus

# Bowen's disease

- Lesions in sun-protected areas suggest arsenic exposure
- red, hyperkeratotic plaque
- Lesions are persistent and slowly enlarge with few symptoms
- eventually they become invasive carcinomas

# Bowen's disease



# Bowen's disease



C is for:

- Chondrodermatitis  
is nodularis  
helicis



# Chondrodermatitis nodularis helicis

- Exquisitely tender, persistent papule usually found on the lateral edge of the helix
- Caucasians over the age of 40, men>women
- Pressure from pillow causes pain
- Special pillows with a “cutout” can be used to improve sleep and speed healing



# Chondrodermatitis nodularis helicis



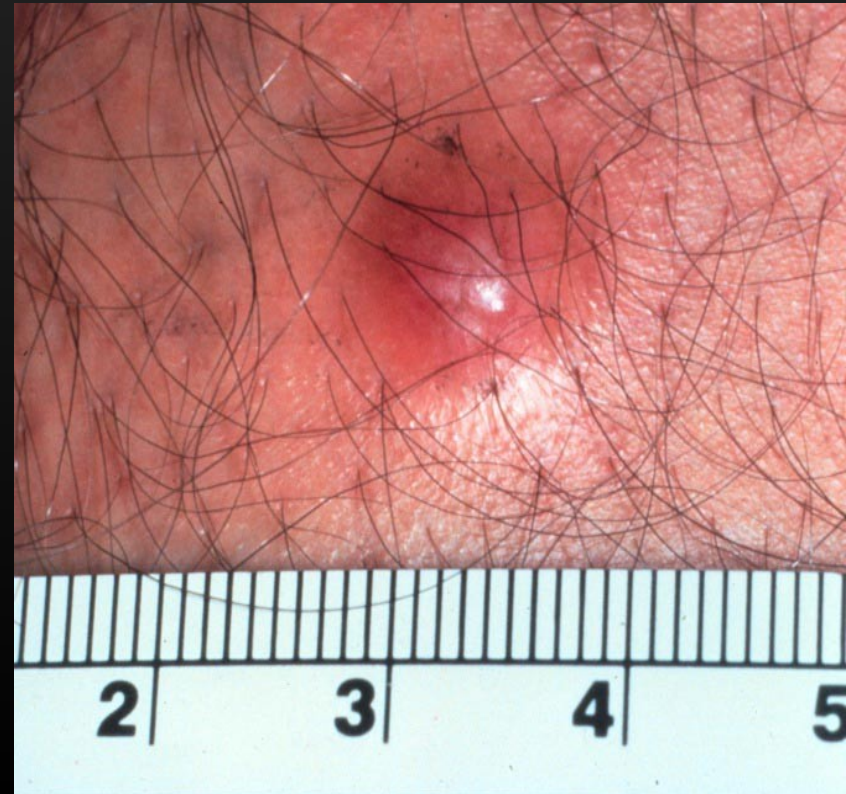


# Chondrodermatitis nodularis helices: treatment

- Intralesional corticosteroids
- Shave excision to remove inflamed tissue (and confirm diagnosis)
- Recurrences common after any therapy

D is for:

- Dermatofibroma



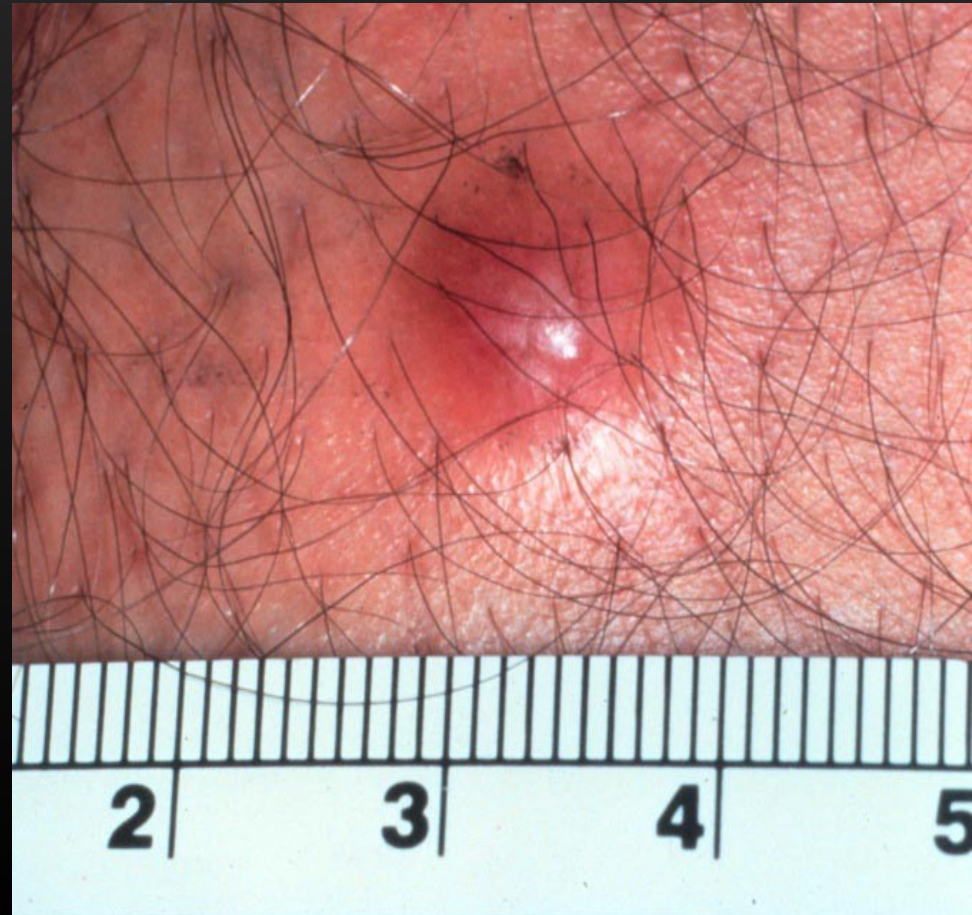
# Dermatofibroma

- very common
- can be found at any age
- legs most common site; also thighs, arms, trunk
- possibly a scar-like reaction to insect bite
- characteristic histology
- slow growing, round to oval, firm nodules

# Dermatofibromas (cont'd)

- deep component is attached to overlying skin
- a few millimeters to several centimeters
- pink to brown, darker in the center

# Dermatofibromas



E is for:

- Erythema multiforme



# Erythema multiforme

- A form of cutaneous reaction to an underlying condition. In 50% of cases, a cause can't be identified
- Common causes: **drugs** (sulfonamides, phenytoin, barbiturates, penicillin, etc.); **infections** (esp. herpes simplex and Mycoplasma); **inflammatory bowel disease**



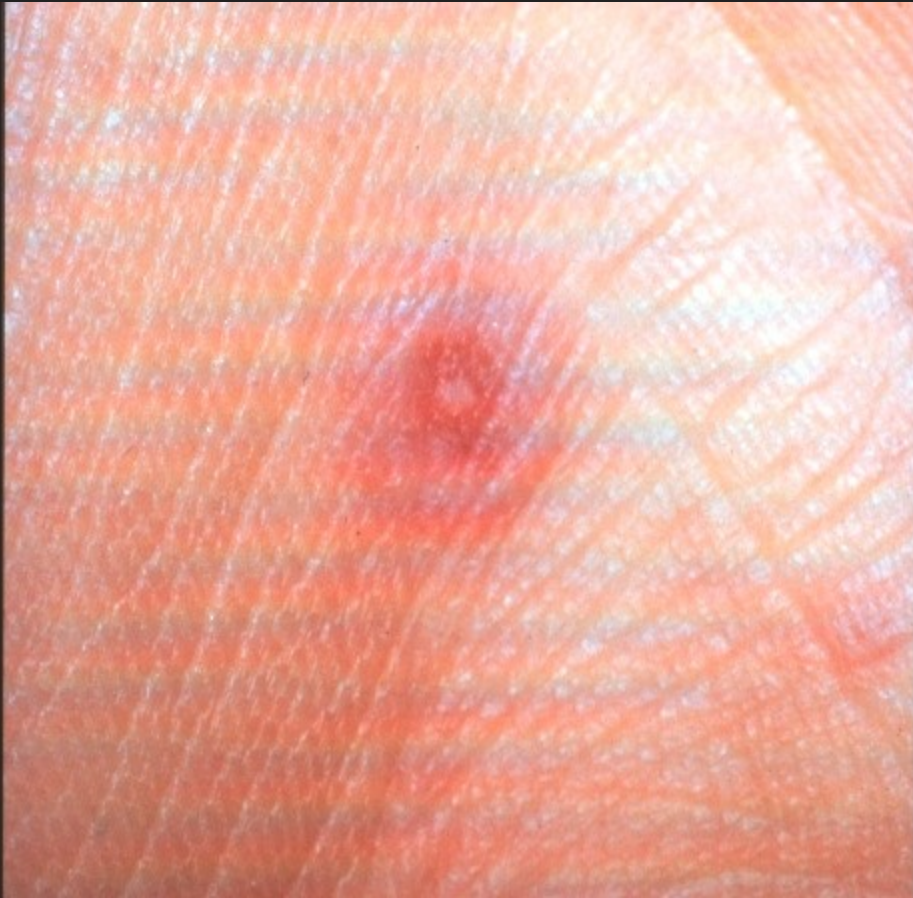
# Erythema multiforme

- Affects young adults, favors extremities like palms and soles and mucous membranes, but can involve any area
- Classic lesion is a target-shaped “iris” lesion, but simple, pink papules and bullae also common
- Eruption usually lasts for a week or two, then spontaneously remits

# Erythema multiforme

- The “target” lesion is a @ 1 cm dull-red macule or papule with a central area of blistering or hemorrhage
- Severe erythema multiforme affecting mucous membranes as well as skin is called “Stevens-Johnson syndrome”

# Erythema multiforme



# Erythema multiforme





F is for:

- Fixed drug eruption



# Fixed drug eruption

- Single or multiple, round, sharply demarcated, dusky red plaques appear soon after drug exposure and reappear in exactly the same spot (hence, *fixed*) each time drug is taken
- Generally accompanied by itching and burning

# Fixed drug eruption





# Fixed drug eruption

- Glans penis a common site
- Tetracycline and trimethoprim/sulfa are often culprits at this site.  
Phenolphthalein in Ex-lax used to be an important cause at any site.
- Many other drugs including over-the-counter medicines (e.g., Sudafed) can cause a fixed drug eruption

G is for:

- Granuloma annulare



# Granuloma annulare

- Ring of small, firm, flesh-colored or pink papules
- Most common on dorsum of hands and feet
- Lesions may be multiple, but generalized GA is rare
- There is a possible relationship between the generalized form and diabetes mellitus

# Granuloma annulare

- Localized lesions are asymptomatic and are best left untreated
- 50% of patients are “clear” in 2 years. Lesion duration is highly variable

# Granuloma annulare



# Granuloma annulare





# H is for:

- Hand, foot and mouth disease





# Hand, Foot and Mouth Disease

- Coxsackie virus A16 (and others)
- Oval (football-shaped) vesicles on pink bases
- Oral lesions may be only manifestation
- Fever, malaise, pharyngitis may be present
- Usually quite mild in children

# Hand, Foot and Mouth Disease

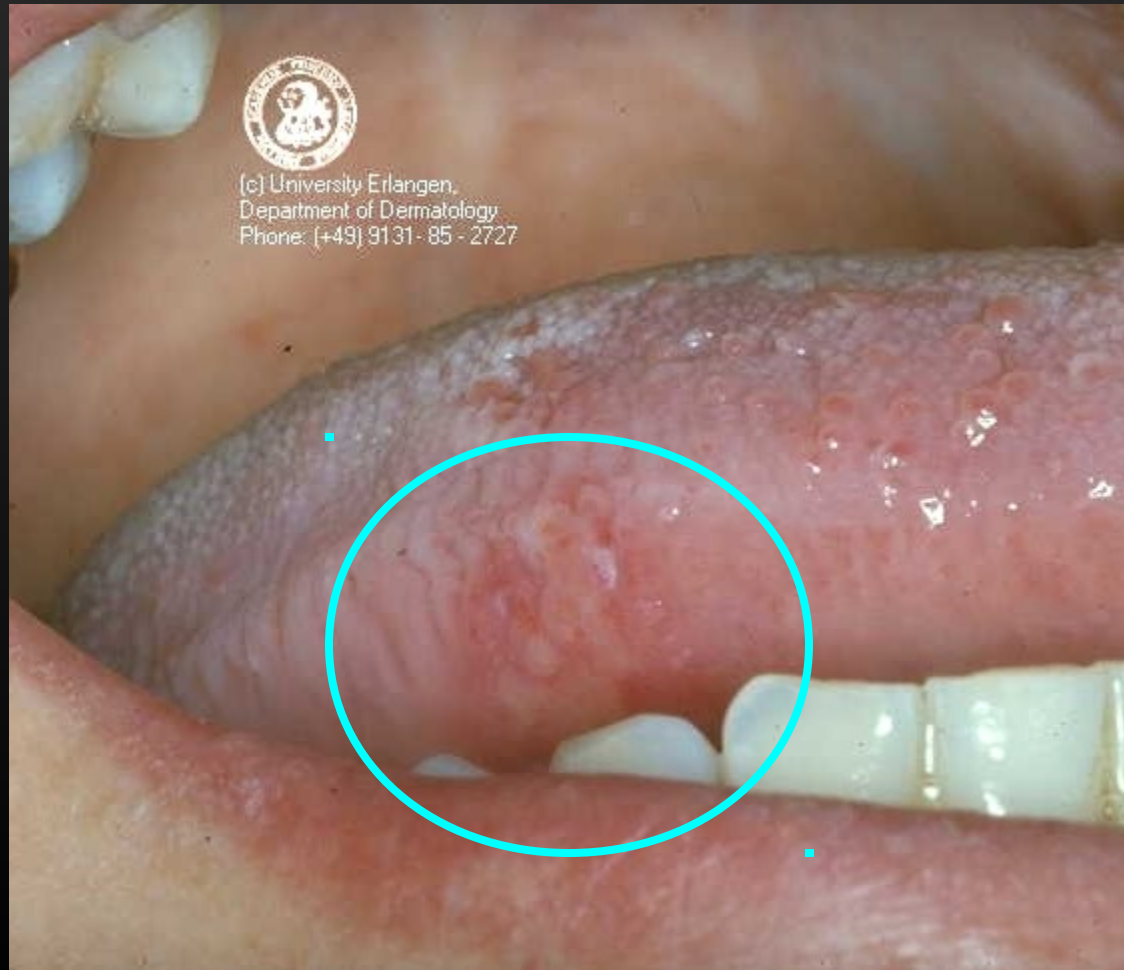


# Hand, Foot and Mouth Disease





# Hand, Foot and Mouth Disease



I is for:

- imiquimod



imiquimod

- an activator of  
Toll-like receptor-  
7



# imiquimod

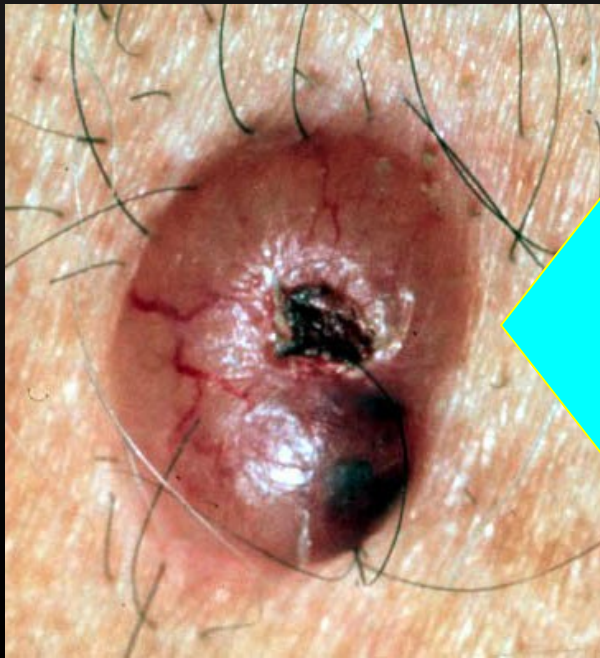
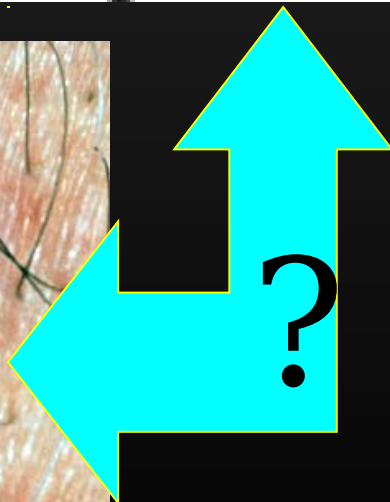
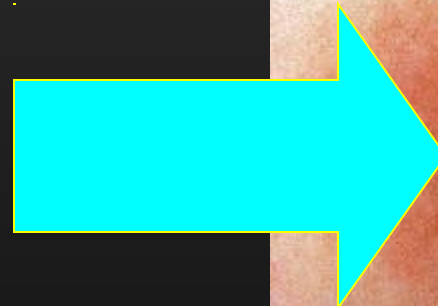
- Drug activity results primarily from induction of interferon alpha (IFN-alpha) and other cytokines in the skin, which stimulate several other aspects of the innate immune response.
- Imiquimod also stimulates acquired immunity, in particular the cellular arm, which is important for control of viral infections and tumors.

# imiquimod

- expected to be effective where exogenous IFN-alpha has shown utility, and where enhancement of cell-mediated immunity is needed.

# imiquimod

- clinical efficacy has been demonstrated against: genital warts, genital herpes and molluscum contagiosum, leishmaniasis, basal cell carcinoma, actinic keratosis, and Bowen's disease.
- Case studies have reported benefit in prevention of keloids after surgery.



J is for:

- Juvenile xanthogranuloma (JXG)



# Juvenile xanthogranuloma (JXG)

- JXGs are benign, usually asymptomatic, papules and nodules composed of histiocytic cells that predominantly occur in infancy and childhood.
- Approximately 20% of cases of JXG occur at birth with as many as 70% of cases occurring in the first year. The remaining 10% of cases present in adults despite the term “juvenile” xanthogranuloma.



# Juvenile xanthogranuloma (JXG)

- asymptomatic, smooth, round, yellow papule or papules.
- Reassurance of parents is appropriate because of the self-limited benign nature of the lesions.
- Patients younger than 2 years with multiple skin lesions comprise 92% of associated cases of ocular involvement. Refer these patients to an ophthalmologist, and continue screening every 6 months through the second year of life.

# Juvenile xanthogranuloma (JXG)



K is for:

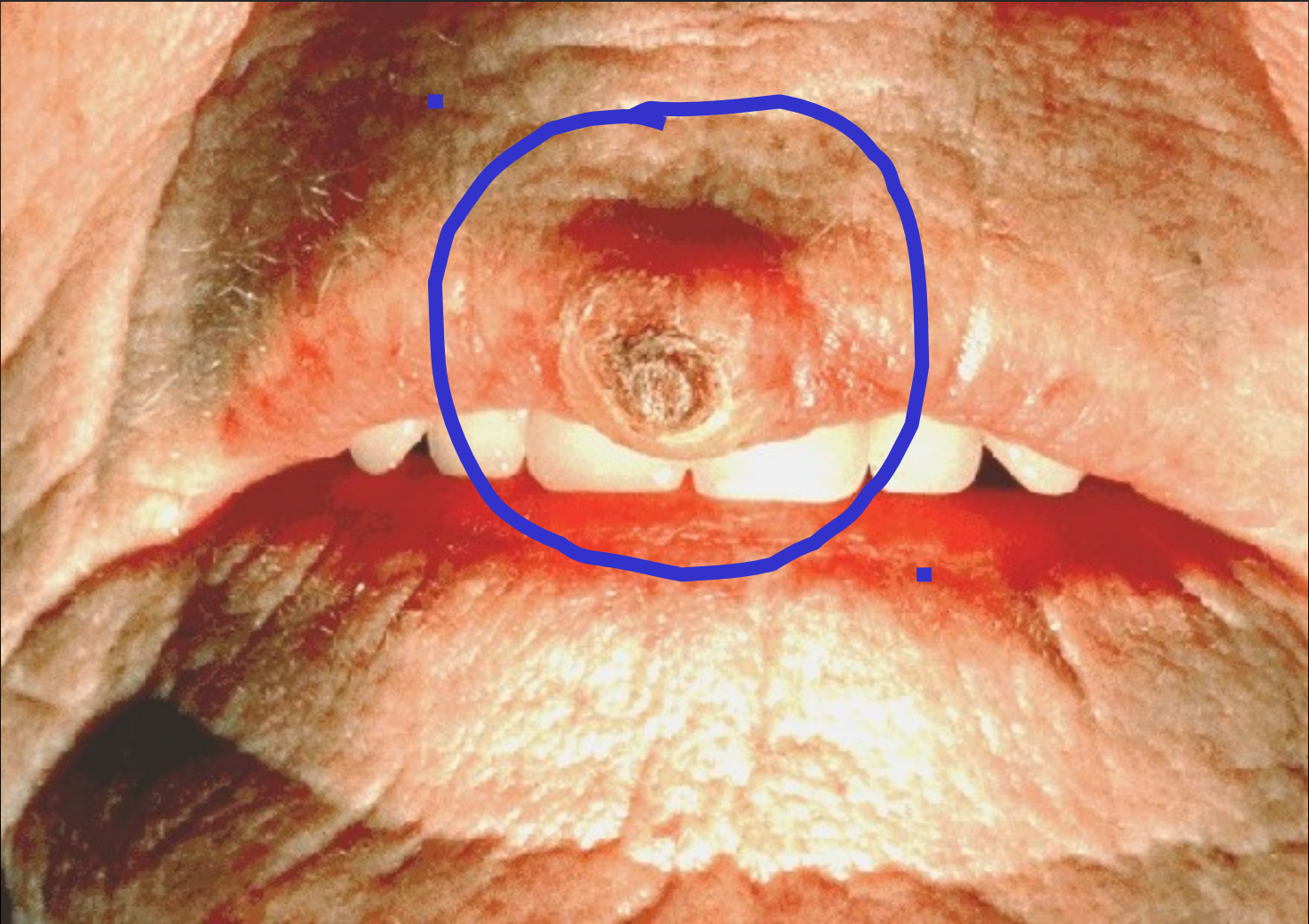
- Keratoacanthoma



# Keratoacanthoma

- Best regarded as a low-grade or abortive squamous cell carcinoma
- Rapidly growing, beehive-shaped nodule with central, keratotic plug
- Usually on sun-exposed areas, esp. limbs
- Grows rapidly for 2-4 weeks, remains stable for weeks to months, then may regress leaving a pitted scar

# Keratoacanthoma





# Keratoacanthoma





# Kaposi's sarcoma

- Caused by or closely linked to herpesvirus type 8 infection



L is for:

- Lichen planu



# Lichen planus

- Itchy, flat-topped papules with irregular angulated borders (polygonal)
- Surface has lacy, net-like pattern of criss-crossed whitish lines
- Flexor surfaces of wrists and forearms, just above ankles, lumbar region, buccal mucosa
- Associated with hepatitis C antibodies in a minority of cases

# Lichen planus





# Lichen planus





# Lichen planus





M is for:

- Morbilliform eruptions



# Morbilliform eruptions (exanthematous drug eruption, maculopapular drug eruption)

- “morbilliform”=refers to a resemblance to the rash of measles (*morbilli* is Latin for measles); measles is a rare disease now, but morbilliform eruptions are common

# Morbilliform eruptions

- a morbilliform eruption is symmetrically distributed on the trunk and proximal extremities, and consists of bright pink macules and slightly raised papules (“maculopapular”) that are a few millimeters in diameter
- individual maculopapules may become confluent, especially in flexural folds such as axilla and groin, and may extend to distal extremities.
- Face and nipples are often spared.

# measles





# Morbilliform eruption



# Morbilliform eruptions

- the list of causes of morbilliform eruptions is extensive: drug eruptions (the most common cause in adults), viral infections, bacterial infections (scarlet fever), graft-versus-host disease, and atypical variants of several idiopathic skin diseases
- the list of offending drugs is long. Various penicillins, NSAIDs, barbiturates, anti-seizure meds and sulfonamides top the list



N is for:

- Necrobiosis lipoidica



# Necrobiosis lipoidica (diabeticorum) = NLD

- More than 50% of patients with necrobiosis lipoidica have insulin-dependent diabetes, but less than 1% of diabetics develop NLD
- Lesions usually on shins, but can be located anywhere on extremities, rarely elsewhere
- Round, violaceous, expanding patch
- Center eventually becomes atrophic and turns a yellow-brown; may ulcerate

# NLD



(c) University Erlangen,  
Department of Dermatology  
Phone: (+49) 9131 - 85 - 272



# NLD





O is for:

- onychomycosis



DOIA

(c) University Erlangen,  
Department of Dermatology  
Phone: (+49) 9131 - 85 - 2727

# Treatment of onychomycosis

- 4-year follow-up of a double-blind, randomized, multicenter study following continuous terbinafine 250 mg daily for 3 or 4 months, compared with itraconazole pulse therapy 400 mg daily for 3 or 4 months
- Complete clinical and mycological cure with terbinafine for 4 months was 78% compared with 35% with terbinafine for 3 months, 24% with itraconazole for 4 months and 28% with itraconazole for 3 months.



# Treatment of onychomycosis

- Conclusions: These results suggest that the initial treatment for onychomycosis should be a 4 month continuous course of terbinafine.
- On other regimens, only a quarter or a third at best had clear nails at 4 years.
- Monitor LFTs—hepatotoxicity rare but reported

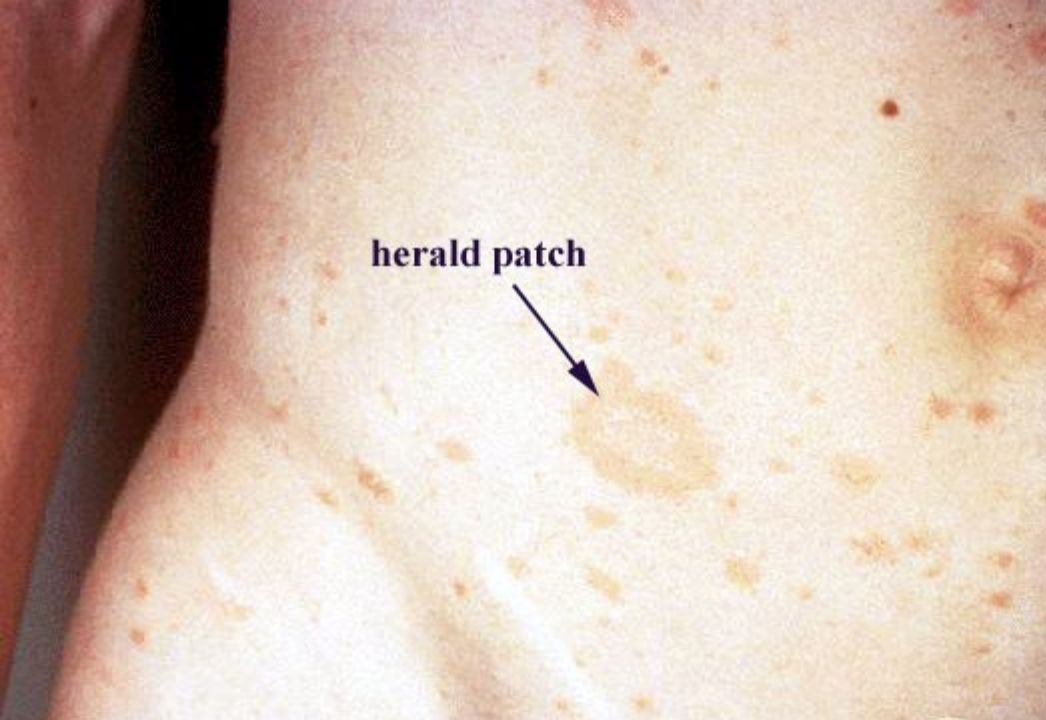
P is for:

- Pityriasis rosea



# Pityriasis rosea

- Very common, benign, usually asymptomatic skin eruption that may be viral in origin. No microbe is currently implicated
- Typically confined to the trunk and may begin with a single, red oval plaque—the herald patch—followed in a week by smaller, similar lesions
- Clears spontaneously in 1-2 months; 2% of patients have a recurrence



# Erythromycin in pityriasis rosea: a double-blind, placebo- controlled trial

JAAD 2000;42:241-244

- 73% of treated patients vs. 0% of placebo patients were clear at 2 weeks
- There were some flaws with this study, but it still suggests a real treatment benefit with oral erythromycin (250 mg QID for adults)
- anti-inflammatory and immunomodulatory effects might contribute towards the action of erythromycin, if any, in PR



# Q is for:

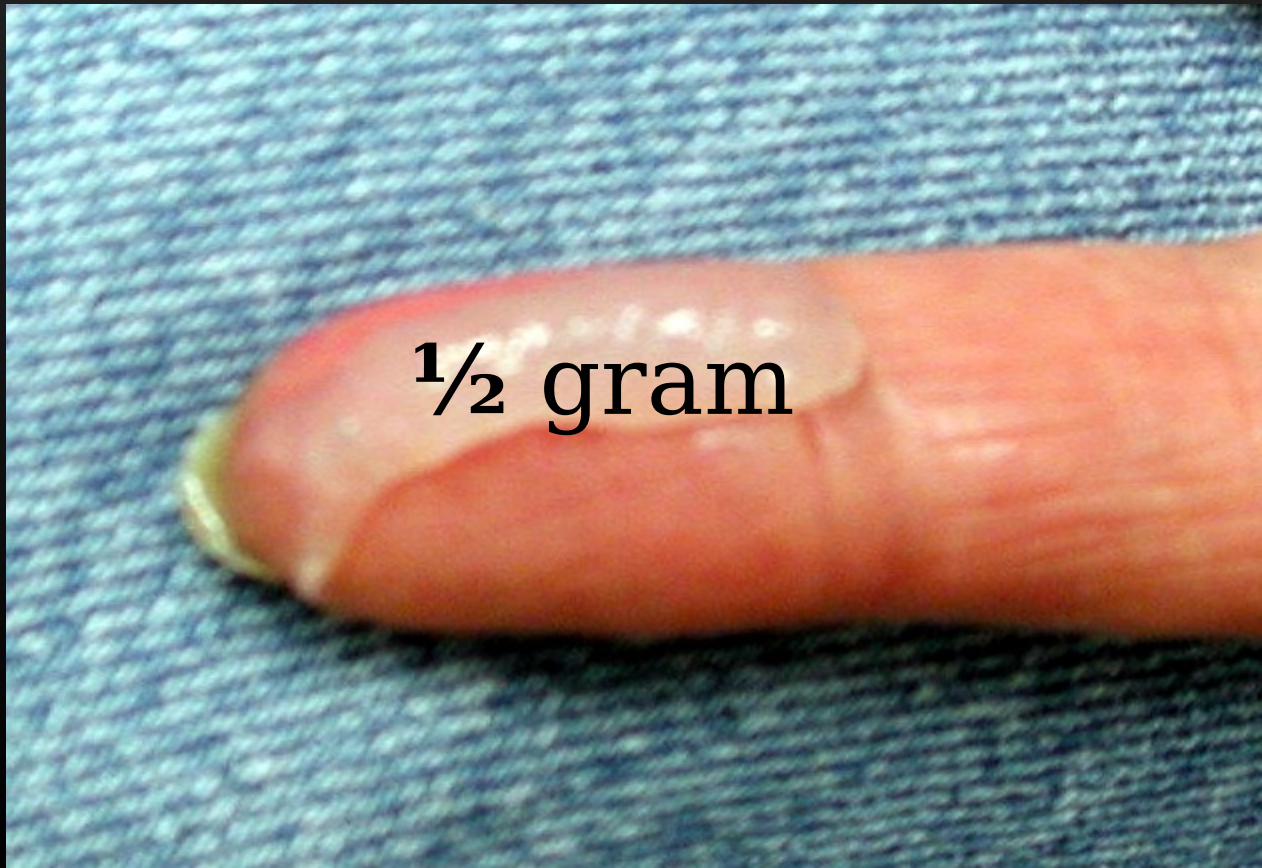
- Quantity of cream to dispense





# Quantity of cream to dispense

- 1 fingertip unit = FTU = 0.5 grams



- One upper limb requires about 3 FTUs for one application = 1.5 grams; so BID for 10 days requires a 30 gram tube
- One lower limb requires about 6 FTUs for one application; a BID for 10 days requires a 60 gram tube



R is for:

- Roseola infantum
- AKA Sixth Disease,  
Exanthem Subitum  
("sudden")



# Roseola infantum

- Caused by human herpesvirus 6 and 7
- Children 3 months to 3 years
- 3 - 5 days of high fever in well child who defervesces, then develops rash



# Roseola infantum

- Rose-pink 2-4mm macules and occasional papules for up to 2 days
- Begins on neck and upper trunk, spreads quickly to abdomen, buttocks, proximal extremities
- Rare complications: hepatitis, hemophagocytosis, mono-like, encephalitis, febrile seizures

# Roseola infantum



roseola



S is for:

- Sweet's syndrome



# **Sweet's syndrome**

(acute febrile neutrophilic dermatosis)

- usually females (4:1);
- Painful, “juicy” red plaques and papules - face, neck, upper chest, arms, legs
- fever, leukocytosis prominent



# Sweet's syndrome

- Associations, benign: URIs, strep, RA, Crohns, sarcoidosis, Behcet's, pregnancy
- Association, malignant: AML, myelodysplasias, lymphoma-- may follow by months to years
- Rx: prednisone, potassium iodide, dapsone

# Sweet's syndrome



T is for:

- toxic epidermal necrolysis



# Toxic epidermal necrolysis (TEN)

- It is unclear whether TEN is a severe form of erythema multiforme or a distinct disease
- 80% of cases have a strong association with a specific **drug** (NSAIDs, sulfonamides, phenytoin, barbiturates, penicillin)
- 1-3 weeks after initial drug exposure, a morbilliform eruption rapidly develops into a widespread erythema

# Toxic epidermal necrolysis (TEN)

- **shortly thereafter, epidermis forms flaccid blisters and sloughs off in sheets, exposing red, oozing dermis**
- **mucous membranes involved in 90% of cases, with risk of ocular scarring**
- **skin is very painful throughout the course of disease; high fever is typical**
- **TEN is a medical emergency, on the order of a total body burn**



# Toxic epidermal necrolysis (TEN)



# Toxic epidermal necrolysis (TEN)



U is for:

- **Urushiol**



# The “poison” of poison ivy

- Urushiols are the highly allergenic catechol chemicals in the oleoresins of the Toxicodendron (Rhus) species: e.g., poison ivy
- Urushiol/Rhus/poison ivy dermatitis is the most common cause of allergic contact dermatitis in the U.S.A.



# Urushiol dermatitis





V is for:

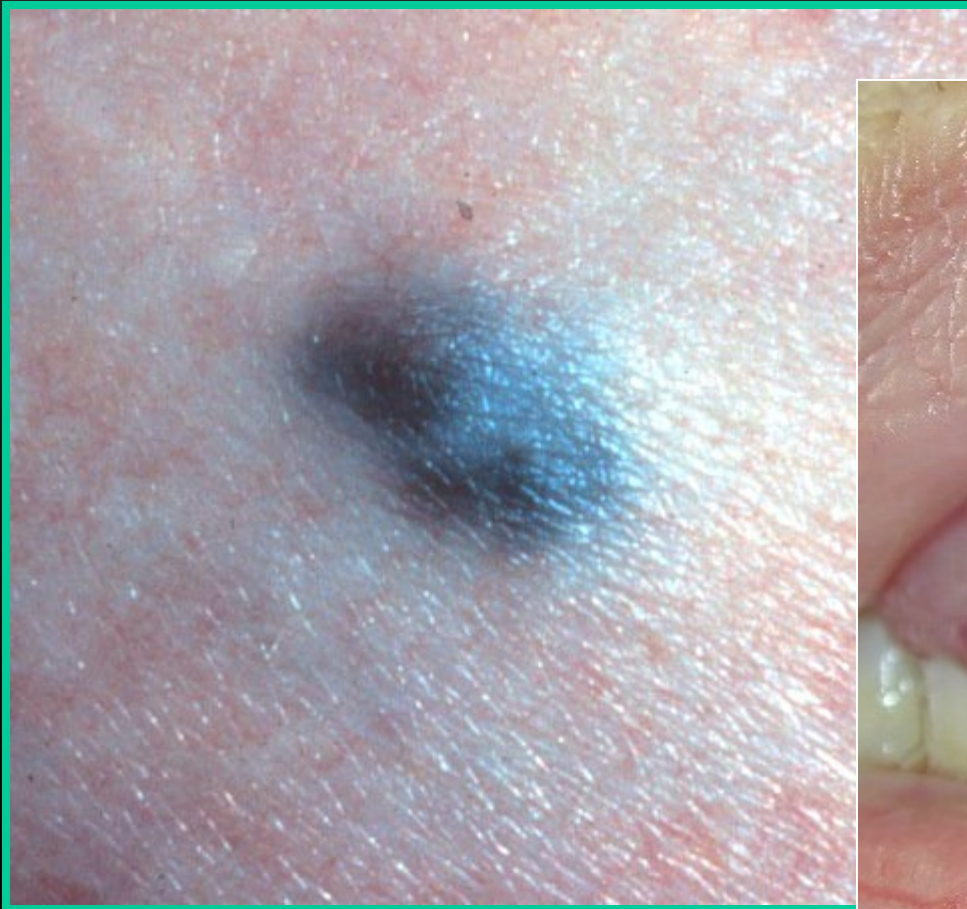
- Venous Lake



# Venous Lake

- older individuals
- lips, ears, face
- dark blue to purple, soft, fully compressible
- do not spontaneously resolve, but harmless
- histology: massively dilated vascular lumen in dermis

# Venous lake



W is for:

- Not warts.....
- But Whitlow (herpetic)!

# Whitlow, herpetic

- **Herpes simplex of the fingertips; Herpes simplex virus 1 (HSV-1) in approximately 60% of cases and HSV-2 in the remaining 40%.**
- **Can resemble a group of warts or a bacterial infection; very painful**
- **Most often reported in pediatric patients with gingivostomatitis and in women with genital herpes**
- **Occupational hazard of dentists, etc.**



# Whitlow, herpetic



4 year old boy;  
brother with herpes

# Whitlow, herpetic



X is for:

- xanthomas

# Xanthomas

- xanthomas may be the first sign of one of the hyperlipoproteinemias, rare but serious metabolic diseases
- normolipemic xanthomas (no evidence of systemic disease) also occur

# Xanthomas

- xanthelasma are yellow-orange soft plaques on eyelids of adults; serum lipids usually normal
- eruptive xanthomas, tendon xanthomas, and tuberous xanthomas are signs of significant hyperlipidemia; these patients require evaluation and prompt treatment



# xanthelasma



(c) University Erlangen,  
Department of Dermatology  
Phone: (+49) 9131-85-2727

# xanthelasma



# Eruptive xanthomas



Y is for:

- Y e s !
- (we're almost done)



Z is for:

- Zostrix = capsaicin cream





# Topical treatment Zoster pain with Zostrix

- Active ingredient in *Capsicum* (hot red chili peppers)
- Enhances release and prevents reaccumulation of substance P from nerve endings
- Initially, burning is felt when crème is applied, but this dissipates with time

# A is for: atopic dermatitis



And so on...

- B is for bullous pemphigoid
- C is for café au lait macules
- D is for dyshidrotic eczema
- E is for erythema chronicum migrans
- F is for.....



"Dr. Sperling, may I be excused?  
My brain is full."